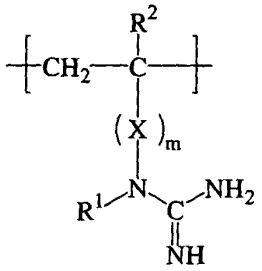
What is claimed is:

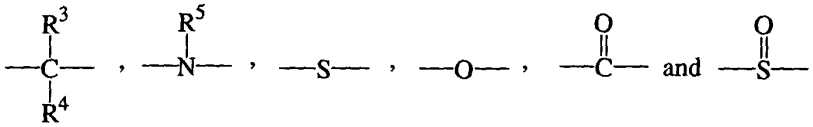
1. A polymer having a weight-average molecular weight of 5.0×10^3 to 1.0×10^7 and comprising a repeating unit represented by formula (I) below:

Formula (I)



wherein R^1 denotes a hydrogen atom or a hydrocarbon group, R^2 denotes a hydrogen atom or a methyl group, X denotes a bivalent connecting group, m denotes 0 or 1, and the guanidino group may form an acid-addition salt.

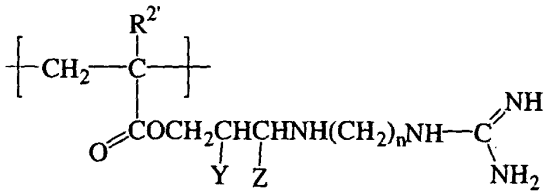
2. The polymer of Claim 1, wherein X in formula (I) denotes a connecting group comprising one or more members selected from the group consisting of



wherein R^3, R^4 and R^5 each independently denote a hydrogen atom, an alkyl group with 1-24 carbon atoms, an aryl group, an arylalkyl group, or hydroxy group.

3. The polymer of Claim 1, wherein said repeating unit is represented by formula (II) below:

Formula (II)



wherein $R^{2'}$ denotes a hydrogen atom or a methyl group, one of Y and Z denotes a hydrogen atom and the other denotes a hydroxy group, n is 0 to 10, and the guanidino group may form an acid-addition salt.

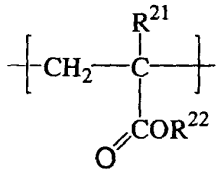
4. The polymer of Claim 1, wherein $(X)_m$ in the formula (I) is >C=O or $-CONH(CH_2)_p-$ wherein p is 0 to 10.

5. The polymer of Claim 1 having 5 or more percent by weight of said repeating unit of formula (I).

6. The polymer of Claim 1 having 15 or more percent by weight of said repeating unit of formula (I).

7. The polymer of Claim 1 further comprising a repeating unit represented by formula (VI) below:

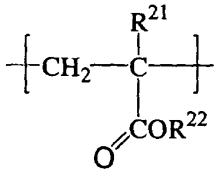
Formula (VI)



wherein R^{21} denotes a hydrogen atom or a methyl group and R^{22} denotes an alkyl group with 1-24 carbon atoms.

8. The polymer of Claim 3 further comprising a repeating unit represented by formula (VI) below:

Formula (VI)



wherein R^{21} denotes a hydrogen atom or a methyl group and R^{22} denotes an alkyl group with 1-24 carbon atoms.

9. The polymer of Claim 1 further comprising a repeating unit derived from a nonionic monomer.

10. The polymer of Claim 4 further comprising a repeating unit derived from

a nonionic monomer.

11. The polymer of Claim 4 further comprising a repeating unit derived from N-(meth)acryloylmorpholine and/or N-vinyl-2-pyrrolidone.

12. A cosmetic composition comprising the polymer of Claim 1.

13. The cosmetic composition of Claim 12 for hair.

14. The cosmetic composition of Claim 12 for skin.

15. The cosmetic composition of Claim 12 for nails.

16. The cosmetic composition of Claim 12 for enhancing hair fixation.

17. The cosmetic composition of Claim 12 further comprising at least one selected from the group consisting of water, alcohol solvents, ester solvents, ketone solvents, and hydrocarbon solvents.

18. The cosmetic composition of Claim 12 further comprising at least one selected from the group consisting of water and alcohol solvents.

19. A method of treating keratinous substances comprising the step of applying the polymer of Claim 1 to a keratinous substance.

20. The method of treating keratinous substances of Claim 14, wherein said keratinous substance is hair, skin or nails.

21. A method of preparing the polymer of Claim 1 comprising the step of preparing a monomer having a guanidino group or an acid-addition salt thereof and the step of polymerizing said monomer alone or copolymerizing said monomer with another monomer.

22. A method of preparing the polymer of Claim 1 comprising the step of

polymerizing a nitrogen-containing monomer alone or copolymerizing the monomer with another monomer to obtain a nitrogen-containing polymer and the step of introducing a guanidino group into said nitrogen-containing polymer.

23. A method of preparing the polymer of Claim 1 comprising the step of polymerizing a monomer having a reactive functional group alone or copolymerizing the monomer with another monomer to obtain a polymer having a reactive functional group and the step of reacting said polymer with a compound having both a guanidino group and a reactive group capable of reacting with said functional group.